REMARKS/ARGUMENTS

Claims 1-16 are currently pending in this application.

Claim Rejections - 35 USC §103(a)

Claims 1 - 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2006/0241423 to Anderson et al. (hereinafter "Anderson") in view of U.S. Patent No. 6,027,457 to Shmulewitz et al. (hereinafter "Shmulewitz").

With respect to claim 1, Anderson and Shmulewitz fail to teach an apparatus including an ultrasonic probe wherein an ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the flat surface on which a deformable object is placed, and the ultrasonic probe is attached to the flat surface so that the flat surface and the ultrasonic probe move together.

As the Examiner indicates, Anderson fails to disclose that the ultrasonic transducer is attached to a flat surface of a movable support enabling them to move together. However, the Examiner asserts that Shmulewitz discloses an ultrasonic transducer probe which is attached to a flat-movable support surface of the device

for the purpose of allowing for mobile examination of a deformable region of a patient's body. The Applicant respectfully disagrees.

In Shmulewitz, an ultrasonic wave transmission/reception surface of the ultrasonic probe is not substantially flush with an upper surface of the flat surface, and the ultrasonic probe is not attached to the flat surface of the movable support. The Examiner does not specifically identify the element in Shmulewitz corresponding to the flat surface of claim 1 of the present application. In Shmulewitz, the window 18 corresponds to the flat surface on which the deformable object is placed. The window is not movable and the ultrasonic probe is not attached to the window. Shmulewitz discloses as follows:

> Table 14 preferably includes a sturdy material, e.g., plastic or metal alloy capable of supporting the components described above and the weight of the patient's tissue. Window 18 forms a first compression surface of the system, and includes a high performance acoustically transparent ("sonolucent") sheet which is sufficiently rigid to support the patient's tissue at a thickness of about 25 micron (1 mil). Window 18 preferably has sufficient rigidity so that the local slope of the plate, under load, does not exceed one degree from the horizontal. (See column 4 lines 12-21, emphasis added).
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> To improve the transfer of acoustic energy, transducer 20 may in addition be acoustically coupled to the lower surface of window 18 using an appropriate coupling agent such as, for example, glycerol. (See column 4 lines 48-51, emphasis added).

Shmulewitz discloses that the window 18 forms the first compression surface and includes an acoustically transparent sheet to support the patient's tissue and

the transducer 20 may be acoustically coupled to the lower surface of the window. In Shmulewitz, the transducer 20 and the window do not move together. The transducer is acoustically coupled to the lower surface of the window using an agent such as glycerol. In contrast, in accordance with claim 1, the ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the flat surface, and the ultrasonic probe is attached to the flat surface so that the flat surface and the ultrasonic probe move together.

In Shmulewitz, the ultrasound transducer 20 is mounted on movable gantry 22. The movable gantry is for moving the ultrasound transducer 20 in AB and CD directions as shown in Figure 4. However, the movable gantry 22 is not the flat surface on which the deformable object is placed. The deformable object is placed on the window 18 and the movable gantry 22 carrying the ultrasound transducer is moving under the window contacting the lower surface of the window.

The structure of Shmulewitz is basically same to the Anderson and both Shmulewitz and Anderson have the same problem. In both Shmulewitz and Anderson, the scanning object is placed on top of the transparent plate and a probe moves under the transparent plate while contacting the lower surface of the transparent plate. In that case, if the thickness of the transparent plate is reduced for a better transparency, the transparent plate may not be sufficiently rigid and may be deformed when the object is placed on the plate and correct location

information may not be obtained. If the thickness of the plate is increased to prevent deformation, the image may not be clear due to the reduced transparency. Both Shmulewitz and Anderson have the same problem because the probe is traveling below the fixed transparent plate contacting the lower surface of the transparent plate. In contrast, in accordance with claim 1, the ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the flat surface and the ultrasonic probe is attached to the flat surface so that the flat surface and the ultrasonic probe move together. This claimed structure permits the thickness of the flat surface to be increased without affecting the transparency of the flat surface.

Shmulewitz and Anderson fail to teach an apparatus including an ultrasonic probe wherein an ultrasonic wave transmission/reception surface of the ultrasonic probe is substantially flush with an upper surface of the flat surface on which a deformable object is placed, and the ultrasonic probe is attached to the flat surface so that the flat surface and the ultrasonic probe move together. Therefore, claims 1 and 16 including dependent claims are not obvious over Anderson and Shmulewitz.

In view of the foregoing remarks, Applicants respectfully submit that the present application, including claims 1 - 16, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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